PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Michel MONNERAT, et al.

Appln. No.: 10/566,709

Confirmation No.: 9002

Filed: February 1, 2006

Docket No: Q92617

Group Art Unit: 3662

Examiner: Harry K. Liu

For: DETERMINING MOBILE TERMINAL POSITIONS USING ASSISTANCE DATA TRANSMITTED ON REQUEST

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is ALCATEL, by virtue of an assignment executed by joint inventors Michel MONNERAT, Arnaud MASSON, and Bruno LOBERT, on September 29, 2006 and October 25, 2006, filed at the U.S. Patent and Trademark Office on January 3, 2006, and recorded by the Assignment Branch of the U.S. Patent and Trademark Office on January 3, 2007 at reel 018747, frame 0789.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant, Appellant's legal representative, or the assignee that will directly affect or be directly affected by, or have a bearing on, the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-49 are all the claims pending claims in the application, and are the subject of this Appeal. Claims 39-43 stand withdrawn. Claims 1-38 and 44-49 stand rejected as follows.

Claims 1-5, 7, 15-17, 19-21, 35, 37-38, 46-47 and 49 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Sheynblat (U.S. Publication No. 2005/192024).

Claims 1-4, 6, 11-13, 15-16, 18, 23, 36, and 46-47 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024).

Claims 8, 22, 26-34, 44-45 and 48 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Jolley (U.S. Patent No. 6,323,803).

Claims 14 and 24-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Tzamaloukas (U.S. Publication No. 2004/0230345).

IV. STATUS OF AMENDMENTS

With the filing of this Brief, all Amendments have been entered and considered by the Examiner. No Amendments were submitted subsequent to Final Office Action dated February 6, 2009. The Appendix included with this Brief sets forth the claims involved in the appeal and reflects all of the claim amendments that have been entered by the Examiner.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The concise description of the claimed subject matter of the present invention is set forth below with regard to certain claims at issue in this Appeal. The following discussion includes citations to various portions of the present application in order to aid in an understanding of the invention by reference to certain exemplary embodiments. These citations, unless otherwise indicated, are intended only to point out supporting exemplary embodiments and are not to be construed as limiting the scope of the claims.

The present invention relates to determining the position of mobile terminals via satellites.

Claim 1

Independent claim 1 is directed to a "method of determining the position of a mobile terminal (UE)." (E.g., Substitute Specification at ¶¶ 44, 45.[1])

The claim includes "said terminal (UE) acquiring pseudo-random codes modulating signals received from satellites (SN) in view belonging to a constellation (CS) of positioning satellites and related to a reference time by comparison with signal replicas resulting from hypotheses," (e.g., Id. at ¶¶ 21, 46, and 64; Fig. 1, elements UE, SN, CS) and

"a step of determining the position of said terminal (UE) from said acquired codes and from navigation data contained in said signals," (e.g., Id. at ¶ 64; Fig. 1, element UE).

[1] Substitute Specification was filed on February 1, 2006.

The claim further requires that "in the acquisition step, i) assistance data is transmitted to said terminal (UE) representing an approximate reference time and its approximate position," (e.g., Id. at ¶ 67; Fig. 1, element UE)

"ii) estimated positions of said constellation (CS) of satellites (SN), estimated distances between said terminal (UE) and each of said satellites (SN) in view and associated Doppler effects are determined as a function of pairs of hypotheses relating to said approximate reference time and said approximate position," (e.g., Id. at ¶¶ 67, 77; Fig. 1, elements CS, SN, UE)

"iii) a signal replica is determined for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval," (e.g., Id. at ¶ 77) and

"iv) the pair of hypotheses corresponding to the signal replica having a maximum correlation with the signal received during said time interval is selected in order to determine said pseudo-random codes modulating said received signals" (e.g., Id. at ¶¶ 81-84).

Claim 15

Independent claim 15 is directed to a "[m]obile terminal (UE)." (E.g., Specification at ¶¶ 44, 45.)

The mobile terminal includes the means-plus-function limitation "means (CR) for acquiring pseudo-random codes modulating signals received from satellites (SN) in view belonging to a constellation (CS) of positioning satellites and related to a reference time by comparison with signal replicas resulting from hypotheses," (e.g., Id. at ¶¶ 21, 46, 64; Fig. 1, elements SN, CS; Fig. 2, element CR) and

the means-plus-function limitation "computation means (MC1-MC3) for determining the position of said terminal (UE) from said acquired codes and from navigation data contained in said received signals," (e.g., Id. at ¶ 64; Fig. 1, element UE; Fig. 2, elements MC1-MC3).

The claim further recites that the "acquisition means (CR) on receiving assistance data representing an approximate reference time and the approximate position of said terminal (UE)," (e.g., Id. at ¶ 67; Fig. 1, element UE; Fig. 2, element CR)

"determine estimated positions of said constellation of satellites (SN), estimated distances between said terminal (UE) and each of said satellites (SN) in view and associated Doppler effects as a function of pairs of hypotheses relating to said approximate reference time and said approximate position," (e.g., Id. at ¶ 67, 77; Fig. 1, elements SN, UE) and

"then determine a signal replica for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval," (e.g., Id. at ¶ 77) and

"select the pair of hypotheses corresponding to the signal replica having a maximum correlation with the received signal during said time interval in order to determine said pseudo-random codes modulating said received signals" (e.g., Id. at ¶¶ 81-84).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-5, 7, 15-17, 19-21, 35, 37-38, 46-47 and 49 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Sheynblat (U.S. Publication No. 2005/192024).

Claims 1-4, 6, 11-13, 15-16, 18, 23, 36, and 46-47 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024).

Claims 8, 22, 26-34, 44-45 and 48 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Jolley (U.S. Patent No. 6,323,803).

Claims 14 and 24-25 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Tzamaloukas (U.S. Publication No. 2004/0230345).

VII. ARGUMENT

Claims 1-38 and 44-49 constitute all the currently pending claims at issue in this Appeal. Of these, claims 1 and 15 are independent.

A. Claim Rejections under 35 U.S.C. § 102

Claims 1-5, 7, 15-17, 19-21, 35, 37-38, 46-47 and 49 stand rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Sheynblat (U.S. Publication No. 2005/192024). Appellant respectfully traverses the rejection.

Claim 1 recites, inter alia, the following:

> iii) a signal replica is determined for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval, and
>
> iv) the pair of hypotheses corresponding to the signal replica having a maximum correlation with the signal received during said time interval is selected in order to determine said pseudo-random codes modulating said received signals.

The above-quoted portion of claim 1 recites determining a signal replica "for each pair of hypotheses . . . over a selected time interval" and selecting "the pair of hypotheses corresponding to the signal replica having a maximum correlation with the signal received during said time interval."

Sheynblat does not disclose determining signal replicas for selected time intervals, and does not disclose any information about how it selects which signal replica to apply. Sheynblat also fails to disclose multiple signal replicas, from which one is selected. In fact, Sheynblat does not appear to discuss signal replicas at all, much less selecting a signal replica "having a

maximum correlation with the signal received during" a selected time interval, as required by claim 1.

Furthermore, in the "Response to Arguments" portion of the Final Office Action of February 6, 2009, the Examiner straightforwardly concedes that "Sheynblat does not specifically disclose 'pair of hypotheses.'" (emphasis added.) However, the Examiner appears to contend that certain of the above-quoted features of claim 1 are inherent to the system of Sheynblat.

When "relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art." MPEP § 2112[IV] (emphasis modified) (citations omitted). The Examiner has not, as of yet, provided evidence or reasoning sufficient to support an argument that the above-quoted features of claim 1 are inherent (i.e., strictly necessary) in all satellite interactions of the type described in Sheynblat

Furthermore, in the Advisory Action of May 18, 2009, the Examiner concedes that "Sheynblat . . . does not specifically disclose 'signal replicas,'" but states that this feature is well known in the art. (emphasis added.) However, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131 (citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987)) (emphasis added). In rare cases, a secondary reference may be used to show inherency; however, the Examiner here is not suggesting inherency, since "signal replicas" are not strictly necessary to Sheynblat. MPEP § 2131.01 ("a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to . . .

[s]how that a characteristic not disclosed in the reference is inherent." The Examiner, here, merely attempts to take Official Notice that the use of "signal replicas" is "well known," which is unsupported by any cited reference.

Thus, Sheynblat fails to identically disclose each and every required element of independent claim 1 and, therefore, fails to anticipate claim 1. Accordingly, Appellant respectfully requests that the rejection of claim 1 and its dependent claims 2-5, 7, 35, 37, and 38 be withdrawn.

Independent claim 15 recites features similar to those of claim 1. Claim 15 is, therefore, also patentable at least for reasons analogous to those set forth above regarding claim 1. Accordingly, Appellant respectfully requests that the rejection of claim 15 and its dependent claims 16, 17, 19-21, 46, 47, and 49 be withdrawn.

B. Claim Rejections under 35 U.S.C. § 103

1. Sheynblat

Claims 1-4, 6, 11-13, 15-16, 18, 23, 36, and 46-47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024). Appellant respectfully traverses the rejection.

Above, Appellant pointed out that Sheynblat is deficient vis-à-vis independent claims 1 and 15. Furthermore, although insufficient to overcome the deficiencies of Sheynblat in this instance, the Examiner appears to rely upon official notice to argue that various features would have been obvious to one of skill in the art, but fails to provide references in support of any such arguments. The MPEP clearly states that "[i]t would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well

known are not capable of instant and unquestionable demonstration as being well-known." MPEP § 2144.03[A].

Therefore, claims 1-4, 6, 11-13, 15-16, 18, 23, 36, and 46-47 would not have been obvious within the meaning of 35 U.S.C. §103(a). Additional, untaught modifications would have been necessary. Accordingly, Appellant respectfully requests that the Examiner withdraw the rejection of claims 1-4, 6, 11-13, 15-16, 18, 23, 36, and 46-47.

2. Sheynblat and Jolley

Claims 8, 22, 26-34, 44-45 and 48 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Jolley (U.S. Patent No. 6,323,803). Appellant respectfully traverses the rejection.

Above, Appellant pointed out that Sheynblat is deficient vis-à-vis independent claims 1 and 15. Appellant respectfully submits that Jolley fails to compensate for the deficiencies of Sheynblat. Therefore, claims 8, 22, 26-34, 44-45 and 48 would not have been obvious within the meaning of 35 U.S.C. §103(a). Accordingly, Appellant respectfully requests that the Examiner withdraw the rejection of claims 8, 22, 26-34, 44-45 and 48.

3. Sheynblat and Tzamaloukas

Claims 14 and 24-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sheynblat (U.S. Publication No. 2005/0192024) as applied to claim 1 above, and further in view of Tzamaloukas (U.S. Publication No. 2004/0230345). Appellant respectfully traverses the rejection.

Above, Appellant pointed out that Sheynblat is deficient vis-à-vis independent claims 1 and 15. Appellant respectfully submits that Tzamaloukas fails to compensate for the deficiencies of Sheynblat. Therefore, claims 14 and 24-25 would not have been obvious within the meaning of 35 U.S.C. §103(a). Accordingly, Appellant respectfully requests that the Examiner withdraw the rejection of claims 14 and 24-25.

C. Conclusion

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: December 10, 2009

CLAIMS APPENDIX

CLAIMS 1-38 and 44-49 ON APPEAL:

1. (Original) Method of determining the position of a mobile terminal (UE), including a step of said terminal (UE) acquiring pseudo-random codes modulating signals received from satellites (SN) in view belonging to a constellation (CS) of positioning satellites and related to a reference time by comparison with signal replicas resulting from hypotheses, and a step of determining the position of said terminal (UE) from said acquired codes and from navigation data contained in said signals, which method is characterized in that, in the acquisition step, i) assistance data is transmitted to said terminal (UE) representing an approximate reference time and its approximate position, ii) estimated positions of said constellation (CS) of satellites (SN), estimated distances between said terminal (UE) and each of said satellites (SN) in view and associated Doppler effects are determined as a function of pairs of hypotheses relating to said approximate reference time and said approximate position, iii) a signal replica is determined for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval, and iv) the pair of hypotheses corresponding to the signal replica having a maximum correlation with the signal received during said time interval is selected in order to determine said pseudo-random codes modulating said received signals.

2. (Original) Method according to Claim 1, characterized in that said assistance data comes from an assistance server (SE) connected to a cellular communication network of said terminal (UE).

3. (Original) Method according to Claim 2, characterized in that said assistance data is transmitted to said terminal (UE) via said cellular communication network.

4. (Previously presented) Method according to Claim 2, characterized in that said approximate position represents the cell in which said terminal (UE) is situated when it requests said assistance data.

5. (Original) Method according to Claim 4, characterized in that the acquisition timing clock of said terminal (UE) is slaved to the timing clock of the base station (BTS) managing the cell in which it is situated.

6. (Previously presented) Method according to Claim 1, characterized in that selecting a signal replica consists in determining for each signal replica a function representing its energy of correlation with said received signal during the time interval and then retaining the signal replica whose energy is the highest.

7. (Previously presented) Method according to Claim 1, characterized in that said assistance data comprises complementary navigation data selected in a group comprising at least ephemerides of the satellites (SN) in view, first time corrections of said satellites in view representing the time difference between said reference time and their timing clock, and second time corrections representing disturbances induced by the ionosphere to the propagation of the signals transmitted by said satellites (SN) in view.

8. (Previously presented) Method according to Claim 1, characterized in that said assistance data comprises complementary navigation data coming from an augmentation system (SG) connected to the satellite navigation system (CS).

9. (Previously presented) Method according to Claim 1, characterized in that said assistance data comprises data representing a three-dimensional model of the cell in which said requesting terminal (UE) is situated.

10. (Previously presented) Method according to Claim 1, characterized in that information data representing the position of the terminal (UE) is stored in corresponding relationship to an identifier of the cell in which it is situated.

11. (Original) Method according to Claim 10, characterized in that said position is also stored in corresponding relationship to auxiliary data representing the quality of said information data transmitted.

12. (Previously presented) Method according to claim 10, characterized in that said approximate position represents the cell in which said terminal (UE) is situated when it requests said assistance data, and further characterized in that a three-dimensional model of said communication network is generated from said cell identifiers and said information data and/or corresponding auxiliary data, after which said three-dimensional model of the communication network is stored.

13. (Previously presented) Method according to Claim 9, characterized in that a three-dimensional model of said communication network is generated from said cell identifiers and said information data and/or corresponding auxiliary data, after which said three-dimensional model of the communication network is stored, and further characterized in that said three-dimensional cell model transmitted to said terminal (UE) is a portion of the three-dimensional model of the communication network.

14. (Previously presented) Method according to Claim 1, characterized in that measurements are effected representing the dynamics of said mobile terminal (UE), a speed, an acceleration and a variation of acceleration relative to each satellite (SN) in view are estimated

from said measurements and from said assistance data, after which an induced phase is deduced therefrom, and said signal replica is determined taking account of said induced phase.

15. (Original) Mobile terminal (UE) comprising means (CR) for acquiring pseudo-random codes modulating signals received from satellites (SN) in view belonging to a constellation (CS) of positioning satellites and related to a reference time by comparison with signal replicas resulting from hypotheses, and computation means (MC1-MC3) for determining the position of said terminal (UE) from said acquired codes and from navigation data contained in said received signals, which terminal is characterized in that said acquisition means (CR), on receiving assistance data representing an approximate reference time and the approximate position of said terminal (UE), determine estimated positions of said constellation of satellites (SN), estimated distances between said terminal (UE) and each of said satellites (SN) in view and associated Doppler effects as a function of pairs of hypotheses relating to said approximate reference time and said approximate position, and then determine a signal replica for each pair of hypotheses corresponding to said estimated positions and distances and to said associated Doppler effects over a selected time interval, and select the pair of hypotheses corresponding to the signal replica having a maximum correlation with the received signal during said time interval in order to determine said pseudo-random codes modulating said received signals.

16. (Original) Terminal according to Claim 15, characterized in that it is adapted to communicate within a cellular communication network each cell of which is managed by a base

station (BTS) and said approximate position represents the cell in which it is situated when it requests said assistance data.

17. (Original) Terminal according to Claim 16, characterized in that said acquisition means (CR) comprise a timing clock slaved to the timing clock of the base station (BTS) managing the cell in which it is situated.

18. (Previously presented) Terminal according to Claim 15, characterized in that said acquisition means (CR) select a signal replica by determining for each signal replica a function representing its energy of correlation with said signal received during the time interval and thereafter retain the signal replica having the highest energy.

19. (Previously presented) Terminal according to Claim 15, characterized in that said assistance data comprises complementary navigation data selected in a group comprising at least ephemerides of the satellites (SN) in view, first time corrections of said satellites (SN) in view representing the time difference between said reference time and their timing clock, and second time corrections representing disturbances induced by the ionosphere to the propagation of the signals transmitted by said satellites (SN) in view.

20. (Previously presented) Terminal according to Claim 15, characterized in that said assistance data comprises data representing a three-dimensional model of the cell in which said requesting terminal (UE) is situated.

21. (Original) Terminal according to Claim 20, characterized in that it determines said position with the aid of said data representing a three-dimensional cell model received.

22. (Previously presented) Terminal according to Claim 15, characterized in that said assistance data comprises complementary navigation data coming from an augmentation system (SG) connected to said satellite navigation system (CS).

23. (Previously presented) Terminal according to Claim 18, characterized in that it transmits to an assistance server (SE) of said cellular communication network information data representing its position so that said information data can be stored in a database (BD) in corresponding relationship to an identifier of the cell in which it is situated.

24. (Previously presented) Terminal according to Claim 15, characterized in that it comprises a micro-inertia measuring device (DM) for delivering measurements representing the dynamics of said terminal and said acquisition means (CR) are adapted to estimate from said measurements and said assistance data a speed, an acceleration and a variation of acceleration

relative to each satellite (SN) in view, to deduce therefrom an induced phase, and then to determine said signal replica taking account of said induced phase.

25. (Original) Terminal according to Claim 24, characterized in that said measuring device (DM) takes the form of a micro-inertia micro-electro-mechanical system.

26. (Previously presented) Assistance server (SE) for a cellular communication network communicating with mobile terminals (UE), characterized in that it transmits assistance data via said communication network to mobile terminals (UE) according to Claim 15 after receiving requests emanating therefrom.

27. (Original) Server according to Claim 26, characterized in that it transmits to each requesting terminal (UE) assistance data comprising complementary navigation data selected in a group comprising at least ephemerides of the satellites (SN) in view, first time corrections of said satellites (SN) in view from said terminal (UE) representing the time difference between said reference time and the timing clock of the terminal (UE), and second time corrections representing disturbances induced by the ionosphere to the propagation of the signals transmitted by said satellites (SN) in view from said terminal and data representing a three-dimensional model of the cell in which said requesting terminal (UE) is situated.

28. (Previously presented) Server according to Claim 26, characterized in that it comprises receiving means (R) for receiving messages from a satellite navigation system (CS) and transmitting to each requesting terminal (UE) assistance data comprising navigation data extracted from messages coming from said satellite navigation system (CS).

29. (Original) Server according to Claim 28, characterized in that said receiver means (R) receive messages from an augmentation system connected to said satellite navigation system (CS) and transmit to each requesting terminal (UE) assistance data comprising complementary navigation data extracted from messages coming from said augmentation system and representing said satellite navigation system (CS).

30. (Previously presented) Server according to Claim 26, characterized in that it comprises processing means (PM) which, on receiving information data representing the position of a terminal (UE), store said information data in a database (BD) in corresponding relationship to an identifier of the cell of a cellular communication network in which said terminal (UE) is situated.

31. (Original) Server according to Claim 30, characterized in that said processing means (PM) determine auxiliary data representing the quality of said received information data and store that auxiliary data in said database (BD) in corresponding relationship to said cell identifier and said information data representing the position of the terminal (UE).

32. (Previously presented) Server according to Claim 30, characterized in that said processing means (PM) generate a three-dimensional model of said communication network from said cell identifiers and said information data and/or corresponding auxiliary data and then store said three-dimensional model of the communication network in said database (BD).

33. (Previously presented) Server according to Claim 26 , characterized in that said processing means (PM) generate a three-dimensional model of said communication network from said cell identifiers and said information data and/or corresponding auxiliary data and then store said three-dimensional model of the communication network in said database (BD), and further characterized in that said processing means (PM) extract from said database (BD) a portion of said three-dimensional model of the communication network representing said three-dimensional model of the cell in which said requesting terminal (UE) is situated in order to transmit it to it.

34. (Previously presented) Server according to Claim 26, characterized in that said processing means (PM) extract from a database (BD) storing portions of a three-dimensional model of said communication network in corresponding relationship to cell identifiers the portion of the model stored in corresponding relationship to the identifier of the cell in which a requesting terminal (UE) is situated in order to transmit said extracted portion to it.

35. (Original) Use of the method according to Claim 1 for multiple-access phase-modulated L-band signals.

36. (Original) Use according to Claim 35, characterized in that said multiple-access phase-modulation is effected in accordance with the W-CDMA technique.

37. (Previously presented) Use of the method according to Claim 1 in RNSS type satellite positioning networks (SN).

38. (Original) Use according to Claim 37, characterized in that said satellite positioning network (SN) is of the GPS type.

39. (Withdrawn) Method of enriching navigation assistance data for determining the position of a mobile terminal, wherein a navigation assistance data server in a mobile telephone network enriches the assistance data it sends to the mobile terminal with corrections broadcast by an SBAS system (of the WAAS, EGNOS, MSAS, etc. type), and wherein said enrichment may be established by one of the following methods:

broadcasting a modified navigation model (ephemerides) taking account of a portion of the SBAS corrections,

broadcasting differential local corrections computed on the basis of the corrections broadcast by an SBAS system (of the WAAS, EGNOS, MSAS, etc. type).

40. (Withdrawn) Method comprising:

an assistance server transmitting to a mobile moving around in a mobile cellular network navigation assistance data supplying it with a representation of the effect of the three-dimensional environment of said mobile, wherein that representation may, for example, be a probability density of masking of satellite signals coming from a given azimuth/elevation direction, in which case the server sends said mobile an azimuth-elevation rosette containing the blocking probability density, and

a mobile using that probability density to improve its positioning computation algorithms,

by initiating a search for satellite signals in decreasing order of blocking probability, and

by improving multipath rejection using information deduced from the probability density.

41. (Withdrawn) Device for supplying a representation of the effect of the three-dimensional model according to Claim 40 of the cell or cells adjacent the cell in which a mobile terminal is moving around, that representation supplying to the mobile terminal a probability density of masking in a given direction, for example.

42. (Withdrawn) Use of the mobile terminal (UE) according to claim 15 for multiple-access phase-modulated L-band signals.

43. (Withdrawn) Use according to Claim 42, characterized in that said multiple-access phase-modulation is effected in accordance with the W-CDMA technique.

44. (Previously presented) Use of the assistance server (SE) according to claim 26 for multiple-access phase-modulated L-band signals.

45. (Previously presented) Use according to Claim 44, characterized in that said multiple-access phase-modulation is effected in accordance with the W-CDMA technique.

46. (Previously presented) Use of the mobile terminal (UE) according to Claim 15 in RNSS type satellite positioning networks (SN).

47. (Previously presented) Use according to Claim 46, characterized in that said satellite positioning network (SN) is of the GPS type.

48. (Previously presented) Use of the assistance server (SE) according to Claim 26 in RNSS type satellite positioning networks (SN).

49. (Previously presented) Use according to Claim 48, characterized in that said satellite positioning network (SN) is of the GPS type.

EVIDENCE APPENDIX:

NONE

RELATED PROCEEDINGS APPENDIX

NONE.